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Research Product 84-03

BRADLEY INFANTRY FIGHTING  
VEHICLE PROCEDURES GUIDE:  
DRIVER

ARI Field Unit at Fort Benning, Georgia  
Training Research Laboratory

February 1984

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the Department of the Army

Mellonics System Development, Litton Systems, Inc.

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A procedures guide was developed for critical tasks for Bradley Infantry Fighting Vehicle (M2) Drivers. Tasks which are not complicated are presented in line-by-line form, with the names of tasks listed in the correct sequence. More complex tasks are presented in a flowchart format with decision trees at choice points. The steps within a procedure are sequenced, and the use of symbols highlights the subtasks. Warnings and cautions are presented, as well as indications to when vehicle indicator lights are critical. The terminology is identical to that found in the technical manual (TM 9-2350-250-10-1).		

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Item 20 (cont'd)

Fighting Vehicle, Infantry, M2, (Hull) and a table of contents is provided. Each operator guide also contains a checklist of the preventive maintenance checks and services for which that operator is responsible. The guide is intended to be used as both a training supplement and as a job performance aid.

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Research Product 84-03

# **BRADLEY INFANTRY FIGHTING VEHICLE PROCEDURES GUIDE: DRIVER**

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## FOREWORD

The U.S. Army has begun introducing the Bradley Infantry Fighting Vehicle (M2) into mechanized infantry units, and has a major investment in training commanders, gunners, and drivers in the procedures of their respective positions. In support of this effort, the Army Research Institute initiated a research program to improve training and to develop procedures to maximize the operational effectiveness of the Bradley in combat.

In recognition of the complexity of the tasks required of BIFV crew members, the U.S. Army Infantry School requested that the Army Research Institute prepare a set of Procedures Guides which summarize the critical tasks for Bradley Commanders, Gunners, and Drivers. Tasks required of these crew members often dictate a specific sequence of actions designed to insure the safety of personnel, accomplish the mission, and safeguard the integrity of the equipment, or are so infrequently performed as to require a job aid for successful completion. Other tasks need to be cross-trained across squad members, or may require rapid familiarization for new crew members as a result of combat losses.

Responding to these task requirements, the Army Research Institute prepared a set of Procedures Guides to follow the same format as Procedures Guides developed by the Army Research Institute for the M1 Tank. The Bradley Guides are of compact size and allow for convenient updating as procedures change or new equipment becomes available. They include critical guidance on emergency procedures, proper use of the vehicle subsystems, and preventive maintenance checks. The intent is to provide each main crew member a position specific guide which, in addition to being technically correct, is more convenient to use than the technical manuals on board each vehicle.

The Driver Guide was prepared according to these guidelines, and is being evaluated in the field by the Infantry School. Operational units and trainers are evaluating the guides both as training supplements and as job aids. Evaluation of this Driver Procedures Guide and its companion Commander and Gunner Procedures Guide (RP 84-04) was undertaken in the institutional environment, and is available as Army Research Institute Research Note Bradley Infantry Fighting Vehicle Procedure Guides: Evaluation (RN 84-61).



EDGAR M. JOHNSON  
Technical Director

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- U.S. Army Infantry School, Weapons Gunnery and Maintenance Department

- Officers, NCOs, and students in the BIFV Commander and BIFV Gunner Courses

- U.S. Army Training Center, Infantry Training Group Officers, NCOs, and students in the BIFV Driver Course

## GENERAL INFORMATION

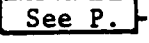
This booklet contains BIFV Driver Procedure Guides. Each guide is for a single activity and is matched to TM 9-2350-252-10-1 (Operator's Manual for Fighting Vehicle, Infantry, M2, Hull).

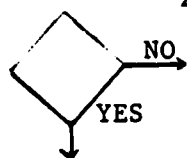
## PURPOSE OF PROCEDURE GUIDES

The guides in this booklet are not intended to take the place of the BIFV TM or training materials. They will help you to remember long or difficult sets of procedures. In short, the guides will help to "jog your memory."

## USE OF THIS BOOKLET

The Table of Contents (on the next page) lists the procedure guides in this booklet. Each guide gives you a step-by-step outline for completing an activity. The following will help you to better use each guide:

1. Some steps within a procedure guide are followed by a page  
 number. On that page within the guide you will find a detailed breakdown of the step.



2. Some of the procedure guides include a question(s). Each question is stated inside a diamond shape. Your "yes" or "no" to the question will show you which path to follow.



3. Some steps within a procedure guide are followed by a box. In the box you will find more information on the step or a caution/warning.



4. Certain steps within a procedure guide require that a knob or switch be turned to a certain position. If that position is written like the symbol to the left, a light should also come on.



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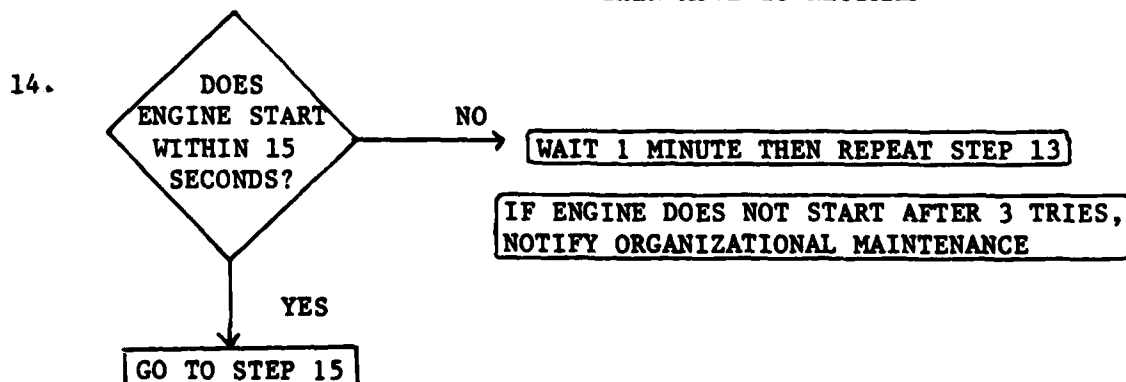
# Prepare To Start

1. DRIVER'S HATCH . . . . . UNLOCK, OPEN
2. DRIVER'S SEAT . . . . . UNSTOW, ADJUST
3. POWER UNIT ACCESS PANELS . . . . . CHECK EDGES FLAT AND BOLTS TIGHT
4. BRAKE PEDAL . . . . . ADJUST
5. SEAT BELT . . . . . FASTEN
6. CVC HELMET . . . . . PUT ON, PLUG IN
7. FIRE SUPPRESSION SWITCH . . . . . CHECK IN AUTO
8. MASTER POWER SWITCH . . . . . ON
9. ENGINE ACCESSORY SWITCH . . . . . ON
10. DRIVER'S INSTRUMENT PANEL . . . . . CHECK
  - 10a. Fuel Gage . . . . . Green
  - b. Volts Gage . . . . . Yellow
  - c. Warning Lights . . . . . Flashing
  - d. Warning Tone . . . . . Sounding
11. FUEL CONTROL . . . . . ON

# Start Engine

To Start Engine Above +40°F (+4°C) do steps 12 thru 15;  
to Start Engine Below +40°F (+4°C) do steps 16 thru 26.

12. HORN . . . . . SOUND - IF TACTICAL SITUATION PERMITS
13. GEAR SELECTOR . . . . . MOVE TO START AND HOLD UNTIL ENGINE STARTS, THEN MOVE TO NEUTRAL



15. DRIVER'S INSTRUMENT PANEL . . . . CHECK

- 15a. Volts gage . . . . . Green
- b. Warning lights . . . . . Off
- c. Warning tone . . . . . Stopped

IF LIGHTS AND TONE DO NOT STOP AFTER 30 SECONDS,  
NOTIFY ORGANIZATIONAL MAINTENANCE

GO TO STEP 27 →

16. COLD START SWITCH . . . . . ON

17.

DOES LIGHT  
COME ON?

NO

NOTIFY ORGANIZATIONAL MAINTENANCE

YES

WAIT 1 MINUTE

GO TO STEP 18

18. HORN . . . . . SOUND - IF TACTICAL SITUATION PERMITS

19. STARTER CUTOUT OVERRIDE . . . . ON  
SWITCH

20. ACCELERATOR PEDAL . . . . . PRESS DOWN 1/4"

21. GEAR SELECTOR . . . . . MOVE TO START AND HOLD UNTIL ENGINE STARTS  
THEN MOVE TO NEUTRAL

22.

DOES  
ENGINE START  
WITHIN 30  
SECONDS?

NO

WAIT 1 MINUTE THEN REPEAT  
STEPS 16 THRU 21

IF ENGINE DOES NOT START AFTER 3 TRIES,  
NOTIFY ORGANIZATIONAL MAINTENANCE

YES

GO TO STEP 23

23. STARTER CUTOUT OVERRIDE . . . . OFF  
SWITCH

24. COLD START SWITCH . . . . . OFF - WAIT UNTIL ENGINE RUNNING SMOOTHLY

25. DRIVER'S INSTRUMENT PANEL . . . . . CHECK

- 25a. Volts gage ..... Green
- b. Warning lights ..... Off
- c. Warning tone ..... Stopped

IF LIGHTS AND TONE DO NOT STOP AFTER  
30 SECONDS, NOTIFY ORGANIZATIONAL  
MAINTENANCE.

26. ENGINE . . . . . FAST IDLE - ENGAGE HAND BRAKE; GEAR  
SELECTOR IN NEUTRAL

- 26a. Accelerator ..... Press down 1"
- b. Throttle Push to  
Release Button ..... Press
- c. Throttle Control  
Handle ..... Pull Out
- d. Engine ..... Let run  
2 to 5 min.
- e. Throttle Push To  
Release Button ..... Press
- f. Throttle Control  
Handle ..... Push in

Drive Vehicle

27. HORN . . . . . SOUND - IF TACTICAL SITUATION PERMITS

28. RAMP . . . . . RAISE

29. HAND BRAKE . . . . . RELEASE

30. GEAR SELECTOR . . . . . SET TO DESIRED GEAR

31. HORN . . . . . SOUND - IF TACTICAL SITUATION PERMITS

32. VEHICLE . . . . . MOVE AS DIRECTED

33. SPECIAL EQUIPMENT . . . . . OPERATE LIGHTS, SMOKE SCREEN, ETC. AS NEEDED

IF FIRE SYSTEM DISCHARGED, NOTIFY  
ORGANIZATIONAL MAINTENANCE.

Stop Vehicle & Shut Down

34. BRAKE PEDAL . . . . . PRESS DOWN SMOOTHLY TO STOP

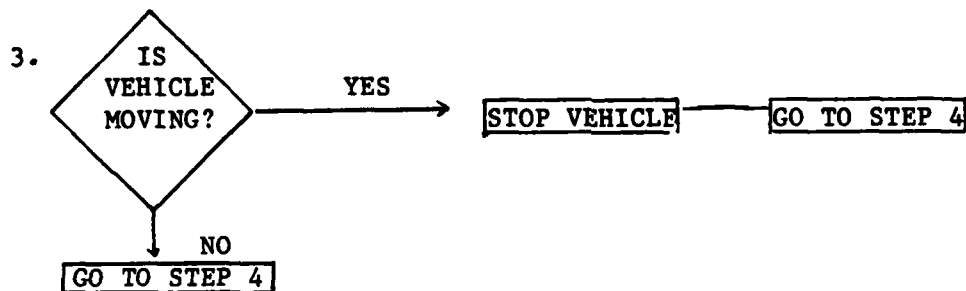
35. GEAR SELECTOR . . . . . MOVE TO NEUTRAL

36. HAND BRAKE . . . . . SET

- 37. FUEL CONTROL . . . . . OFF
- 38. ENGINE ACCESSORY SWITCH . . . . . OFF
- 39. FIRE SUPPRESSION SWITCH . . . . . CHECK IN AUTO
- (H)40. CARGO HATCH COVER . . . . . CLOSE
- (H)41. FIRING PORTS . . . . . SECURE
- (G)42. TURRET . . . . . SECURE
- 43. HORN . . . . . SOUND — IF TACTICAL SITUATION PERMITS
- 44. RAMP . . . . . LOWER SO CREW CAN EXIT
- 45. HORN . . . . . SOUND — IF TACTICAL SITUATION PERMITS
- 46. RAMP . . . . . RAISE
- 47. MASTER POWER SWITCH . . . . . OFF
- 48. DRIVER'S HATCH COVER . . . . . CLOSE/LOCK
- 49. ENGINE ACCESS DOOR . . . . . LOCK

### Runaway Engine - Immediate Action

1. FUEL CONTROL . . . . . OFF
2. GEAR SELECTOR . . . . . NEUTRAL



4. HAND BRAKE . . . . . SET
5. TRIM VANE . . . . . LOWER
6. POWER UNIT ACCESS DOOR . . . . . OPEN
7. FUEL INLET HOSE . . . . . PULL UP ON QUICK DISCONNECT
8. ORGANIZATIONAL MAINTENANCE . . . . . NOTIFY

GUNNER MAY ALSO STOP RUNAWAY ENGINE BY MANUALLY TURNING OFF  
MAIN FUEL SHUT OFF VALVE

Rough Terrain - Vehicle Operations

WEAR SEAT BELTS AT ALL TIMES

VEHICLE MUST MOVE STEADILY AND STRAIGHT ON

1. TRENCHES . . . . . NOT GREATER THAN 8 FT. (2.5 m)
2. VERTICAL WALLS . . . . . NOT GREATER THAN 36 IN. (91 cm)  
OR OBSTACLES
3. HILLS . . . . . NOT GREATER THAN 60%;  
ACCELERATE TO KEEP FROM STALLING
4. SIDE SLOPES . . . . . NOT GREATER THAN 40%;  
USE LOW GEAR
5. SNOW, ICE, MUD . . . . . MOVE SMOOTHLY AND SLOWLY
6. PARK . . . . . SHELTERED, FIRM SURFACE

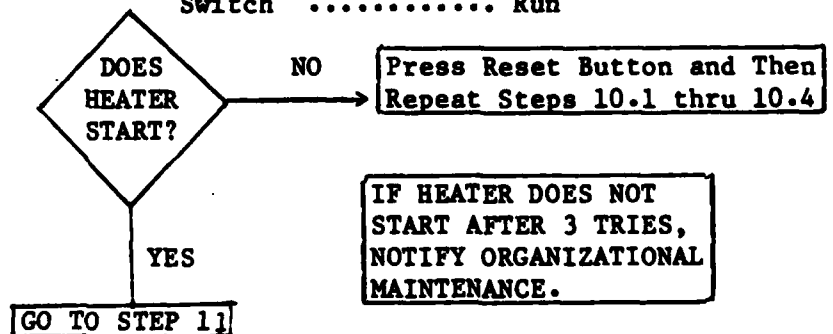
## Extreme Cold - Operations

### Prepare

1. ALL HATCH COVERS . . . . . CLOSE
2. HORN . . . . . SOUND — IF TACTICAL SITUATION PERMITS
3. RAMP . . . . . RAISE
4. RAMP ACCESS DOOR . . . . . CLOSE
5. TURRET SHIELD DOOR . . . . . OPEN
6. GRILLE COVER . . . . . INSTALL
- (G) 7. 25mm GUN . . . . . MANUALLY DEPRESS
8. TARPAULIN . . . . . COVER VEHICLE

### Operate

9. TARPAULIN . . . . . FOLD BACK TO UNCOVER GRILLES
10. WINTERIZATION KIT . . . . . INSTALL
  - 10a. Exhaust Grille Cover .. Unfold to Uncover Exhaust Grille
  - b. Master Power ..... ON
  - c. Winterization Heater .. Start
    - 10.1 Hi Lo Switch ..... Hi
    - .2 Run/Off/Start ..... Start Switch
    - .3 Winterization Heater Light ..... ON
    - .4 Run/Off/Start Switch ..... Run



11. WINTERIZATION HEATER . . . . . LET RUN AT LEAST 30 MINUTES — BEFORE STEP 12
12. PERSONNEL HEATER . . . . . OPERATE (see P. 22) — WITH WINTERIZATION HEATER FOR 1 MORE HOUR BEFORE STEP 13.
13. WINTERIZATION AND PERSONNEL HEATERS . . . . . OFF — DO NOT TURN OFF MASTER POWER UNTIL HEATER STOPS RUNNING AND LIGHT GOES OUT.



14. ENGINE . . . . . COLD START (see p. 2) — **RUN 15 MINUTES**
15. HAND BRAKE . . . . . RELEASE
16. BRAKE PEDAL . . . . . PRESS AND HOLD THRU NEXT STEP
17. GEAR SELECTOR . . . . . MOVE TO PIVOT STEER AND HOLD 5 MIN.

**RAISE IDLE GRADUALLY**

- (G) 18. 25mm GUN . . . . . MANUALLY ELEVATE
19. GEAR SELECTOR . . . . . MOVE TO NEUTRAL - LOWER IDLE TO SLOW
20. HAND BRAKE . . . . . SET
21. INTAKE GRILLE . . . . . PARTIALLY UNCOVER
22. TARPAULIN . . . . . REMOVE
23. STEPS 15 THRU 17 . . . . . REPEAT
24. VEHICLE . . . . . DRIVE — **SLOWLY UNTIL ENGINE WARMS**

**IF COOLANT TEMP GOES TO RED OR YELLOW,  
REPEAT 19 THRU 21, AND THEN 15 THRU 17.**

After Operation

25. ENGINE . . . . . STOP
26. TRIM VANE . . . . . LOWER
27. POWER UNIT ACCESS DOOR . . . . . OPEN
28. FUEL FILTER . . . . . DRAIN OUT WATER — **IF EXCESSIVE WATER  
AND/OR SEDIMENT IS  
FOUND NOTIFY ORGANI-  
ZATIONAL MAINTENANCE**
29. POWER UNIT ACCESS DOOR . . . . . CLOSE
30. TRIM VANE . . . . . STOW
31. GRILLE COVER . . . . . INSTALL
32. 25mm GUN. . . . . DEPRESS TO 0 MILS
33. TARPAULIN . . . . . COVER VEHICLE
34. HATCH COVER . . . . . CLOSED
35. RAMP . . . . . RAISED
36. RAMP ACCESS DOOR . . . . . CLOSED

## Install, Operate, and Remove Driver's Night Viewer

1. DRIVER'S PERISCOPE . . . . . REMOVE FROM DRIVER'S HATCH COVER
2. DRIVER'S NIGHT VIEWER . . . . . UNSTOW -

IF USING VEHICLE POWER, CHECK TO SEE  
THAT BATTERY HAS BEEN REMOVED. IF  
USING BATTERY POWER, INSTALL BATTERY.

3. 2 LATCH HANDLES . . . . . SET IN OPEN POSITION
4. ENTRANCE WINDOW . . . . . REMOVE AND STOW  
COVER & EYEPIECE PROTECTIVE CAP
5. DRIVER'S NIGHT VIEWER . . . . . INSTALL AND LOCK
6. OFF/BRIGHT ROTARY SWITCH . . . . . OFF
7. DRIVER'S PERISCOPE. . . . . STOW

IF USING VEHICLE POWER, DO STEPS 8 THRU 13.  
IF USING BATTERY POWER, DO STEPS 10 THRU 13.

8. VEHICLE POWER CABLE . . . . . INSTALL ON NIGHT VIEWER
9. MASTER POWER . . . . . ON
10. OFF/BRIGHT ROTARY SWITCH . . . . . MAXIMUM BRIGHT
11. BRIGHTNESS . . . . . ADJUST
12. NIGHT VIEWER . . . . . POSITION AS NEEDED
13. OFF/BRIGHT ROTARY SWITCH . . . . . OFF

IF USING VEHICLE POWER, GO TO STEP 14. IF  
USING BATTERY POWER, GO TO STEP 16.

14. MASTER POWER . . . . . OFF
15. VEHICLE POWER CABLE . . . . . REMOVE FROM VIEWER
16. NIGHT VIEWER . . . . . UNLOCK AND REMOVE FROM DRIVER'S  
HATCH COVER — REMOVE BATTERY  
IF PRESENT.

17. EYEPIECE PROTECTIVE CAP . . . . . INSTALL  
AND ENTRANCE WINDOW COVER
18. DRIVER'S PERISCOPE . . . . . UNSTOW
19. DRIVER'S PERISCOPE . . . . . INSTALL
20. DRIVER'S NIGHT VIEWER . . . . . STOW

# Slave Start - Start Engine With Outside Power Source

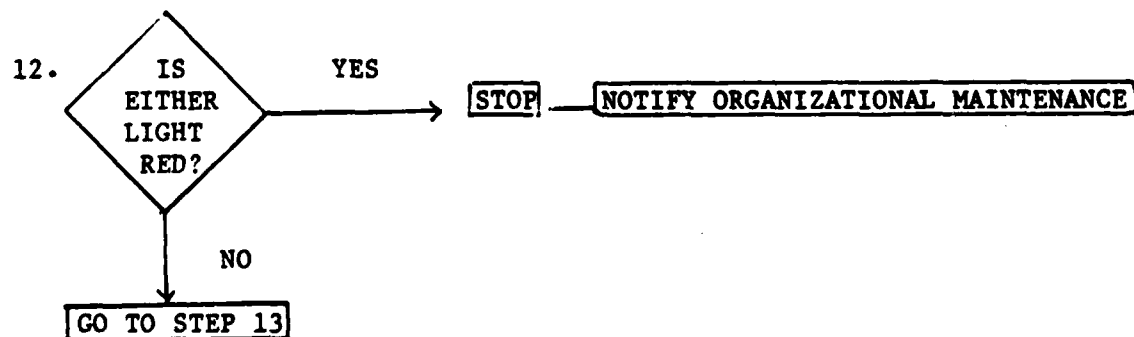
OUTSIDE POWER CAN BE AN OPERATIONAL VEHICLE  
OR A 24V POWER SOURCE.

STEPS 1 THRU 8 APPLY TO BOTH OPERATIONAL  
AND DISABLED VEHICLES.

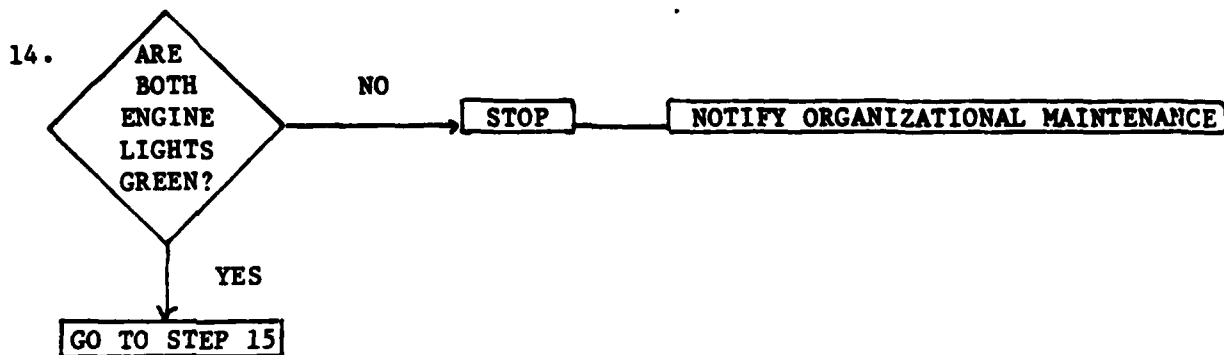
1. MASTER POWER SWITCH . . . . . OFF
2. ENGINE ACCESSORY SWITCH . . . . . OFF
3. TURRET POWER SWITCH . . . . . OFF
4. FIRE SUPPRESSION SWITCH . . . . . MANUAL
5. STARTER CUTOUT OVERRIDE SWITCH . . . . . OFF
6. FWD AND REAR BILGE PUMP SWITCHES. . . . . OFF
7. SMOKE SCREEN GENERATOR SWITCH . . . . . OFF
8. COLD START SWITCH . . . . . OFF

SLAVE CABLE MUST BE OBTAINED FROM ORGANIZA-  
TIONAL MAINTENANCE.

9. SLAVE CABLE . . . . . INSTALL -  
BOTH VEHICLES
10. OPERATIONAL VEHICLE . . . . . ON  
MASTER POWER SWITCH
11. SLAVE RECEPTACLE POWER LIGHTS . . . . . CHECK

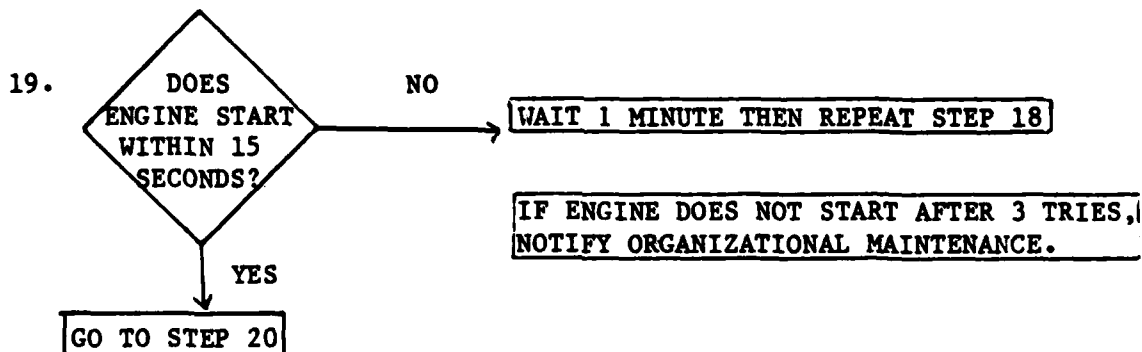


13. ENERGIZE SLAVE RECEPTACLE BUTTON . . . . . PRESS  
ON OPERATIONAL VEHICLE



SLAVE RECEPTACLE POWER LIGHT MUST BE GREEN IN BOTH VEHICLES. IF ONE OR BOTH ARE RED, DO NOT CONTINUE.

15. OPERATIONAL VEHICLE ENGINE . . . . . START
16. DISABLED VEHICLE ENGINE . . . . . ON  
ACCESSORY SWITCH
17. DISABLED VEHICLE FUEL CONTROL . . . . . ON
18. DISABLED VEHICLE GEAR SELECTOR . . . . . MOVE TO START AND  
HOLD UNTIL IT STARTS



20. OPERATIONAL VEHICLE . . . . . OFF, THEN ON  
MASTER POWER  
TO DE-ENERGIZE SLAVE RECEPTACLE
21. SLAVE CABLE . . . . . REMOVE FROM BOTH VEHICLES
22. DISABLED VEHICLE MASTER POWER . . . . . ON
23. DISABLED VEHICLE DRIVER'S INSTRUMENT PANEL . . . . . CHECK

- 23a. Volts gage . . . . . Green
- 23b. Warning lights . . . . . Off
- 23c. Warning tone . . . . . Stopped

IF LIGHT AND TONE DO NOT STOP AFTER 30 SECONDS, NOTIFY ORGANIZATIONAL MAINTENANCE.

## Tow Disabled Vehicle

**DO NOT TOW VEHICLE WITH DAMAGED TRANSMISSION.  
NOTIFY ORGANIZATIONAL MAINTENANCE**

1. REAR OF TOWING VEHICLE AND . . . . ALIGN  
FRONT OF DISABLED VEHICLE

**IF TOWING WITH TOW BAR, DO STEPS 2 THRU 4;  
IF TOWING WITH CABLE, GO TO STEP 5**

2. TWO PINS AND SHACKLES . . . . . REMOVE FROM 2 TOWING EYES ON DISABLED  
VEHICLE
- (H)3. TOW BAR . . . . . INSTALL ON FRONT OF DISABLED VEHICLE
- (H)4. TOW BAR . . . . . INSTALL ON PINTLE OF TOWING VEHICLE

**GO TO STEP 9**

5. TOW CABLE . . . . . REMOVE FROM DISABLED VEHICLE
6. TOW CABLE . . . . . REMOVE FROM TOWING VEHICLE
7. FOUR PINS AND SHACKLES . . . . . REMOVE FROM REAR OF TOWING VEHICLE (2)  
AND FRONT OF DISABLED VEHICLE (2)
8. TOWING CABLES . . . . . INSTALL -- **LEFT REAR OF TOWING VEHICLE  
TO RIGHT FRONT OF DISABLED  
VEHICLE. RIGHT REAR OF TOW-  
ING VEHICLE TO LEFT FRONT OF  
DISABLED VEHICLE.**
9. DRIVER'S HATCH COVER . . . . . CLOSE
10. DISABLED VEHICLE GEAR SELECTOR . . MOVE TO TOW AND LOCK
11. HAND BRAKE IN DISABLED VEHICLE . . RELEASE
- (G)12. TURRET IN DISABLED VEHICLE . . . . TRAVERSE TO 3200 mls
13. ENGINE IN TOWING VEHICLE . . . . . START

**ALL PERSONNEL MUST STAY CLEAR OF TAUT CABLES**

DO NOT TOW AT SPEEDS GREATER THAN 15 MPH WITH TOW BAR  
OR 5 MPH WITH CABLE OR OVER ROUGH TERRAIN.

13. TOWING VEHICLE GEAR SELECTOR . . . . SET TO DRIVE, LOW OR REVERSE —

DO NOT USE REVERSE WITH CABLES

14. HEADLIGHTS . . . . . OPERATE — IF TACTICAL SITUATION  
PERMITS

15. HORN . . . . . SOUND — IF TACTICAL SITUATION  
PERMITS

16. VEHICLES . . . . . MOVE, AT CONTROLLED SPEED

17. VEHICLES . . . . . STOP WITHOUT BRAKING — COAST TO  
A STOP

18. HAND BRAKE . . . . . SET

19. TOWING VEHICLE ENGINE . . . . . STOP

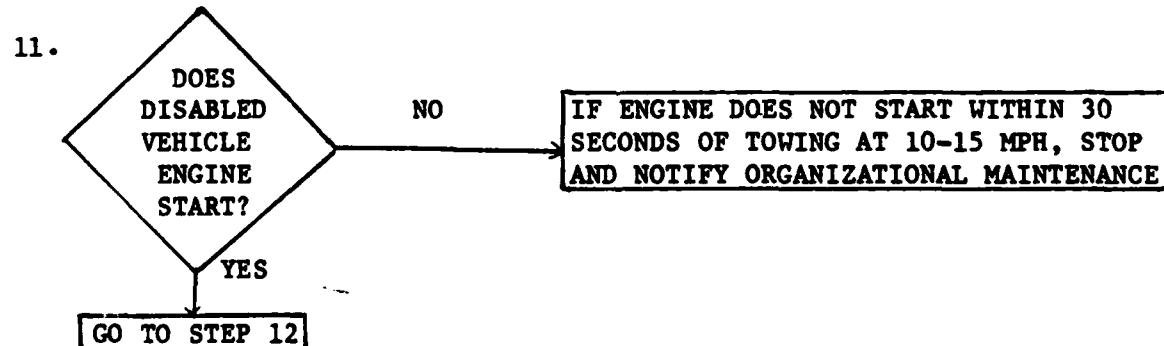
DO STEP 21 or 22

21. TOW BAR . . . . . DISCONNECT FROM PINTLE OF TOWING  
VEHICLE AND TOWING EYES OF DISABLED  
VEHICLE

22. TOWING CABLES . . . . . REMOVE FROM TOWING EYES AFTER  
DRIVING BACKWARD UNTIL CABLES SLACK

# Tow Start


1. TWO VEHICLES . . . . . CONNECT WITH TOWING DEVICE
2. BEFORE OPERATIONS PMCS . . . . . DO
3. DISABLED VEHICLE MASTER . . . . . ON  
POWER SWITCH
4. DISABLED VEHICLE ENGINE . . . . . ON  
ACCESSORY SWITCH
5. DISABLED VEHICLE FUEL . . . . . ON  
CONTROL HANDLE
6. DISABLED VEHICLE HAND . . . . . RELEASE  
BRAKE
7. DISABLED VEHICLE GEAR . . . . . MOVE TO TOW AND LOCK  
SELECTOR
8. TOWING VEHICLE ENGINE . . . . . START
9. TOWING VEHICLE . . . . . TOW DISABLED VEHICLE AT SPEED OF  
10-15 MPH (15-25 KMPH)
10. DISABLED VEHICLE GEAR . . . . . MOVE TO TOW START  
SELECTOR



12. DISABLED VEHICLE GEAR . . . . . MOVE TO DRIVE  
SELECTOR
13. BOTH VEHICLES . . . . . STOP
14. GEAR SELECTOR BOTH VEHICLES . . . . . NEUTRAL
15. HAND BRAKES . . . . . SET
16. DISABLED VEHICLE . . . . . CHECK FOR NORMAL GAGE  
INSTRUMENT PANEL AND LIGHT INDICATIONS
17. TOWING DEVICE . . . . . REMOVE

## WATER OPERATIONS

### Ford Water Greater Than 1-1/2 Feet, Less Than 3-1/2 Feet Deep

1. FRONT/REAR HULL DRAIN PLUGS . . . . CLOSE
2. TWO FINAL DRIVE HULL DRAIN . . . . SECURE  
PLUGS
3. FOUR UPPER HULL DRAIN PLUGS . . . . SECURE
4. BILGE PUMPS . . . . . CHECK OPERATION
5. RAMP . . . . . RAISE — SOUND HORN IF TACTICAL  
SITUATION PERMITS
6. ENGINE . . . . . START
7. FWD AND REAR BILGE PUMP . . . . . MOVE TO  ON  
SWITCHES
8. WATER . . . . . FORD
9. FWD AND REAR BILGE PUMP . . . . . MOVE TO OFF — AFTER BILGES  
ARE EMPTY.  
SWITCHES

### Prepare to Enter Water - Swim

1. 4 HATCH COVERS . . . . . OPEN
- (G) 2. 25mm GUN . . . . . ELEVATE TO 550 mils
3. RAMP . . . . . LOWER
4. FINAL DRIVE HULL DRAIN . . . . CHECK  
PLUGS
5. FRONT/REAR HULL DRAIN PLUGS . . CLOSE
- (H) 6. FIRING PORT WEAPONS . . . . . REMOVE
- (H) 7. FIRING PORT VENTS . . . . . CLOSE
8. TWO FRONT UPPER HULL . . . . . REMOVE  
DRAIN PLUGS



9. TWO REAR UPPER HULL . . . . . REMOVE  
DRAIN PLUGS
10. RAMP . . . . . CHALK AND RAISE; CHECK SEAL
11. RAMP ACCESS DOOR . . . . . CHALK AND CLOSE; CHECK SEAL
12. EXHAUST SHROUD . . . . . RAISE
13. WATER BARRIER . . . . . ERECT — See P. 17

Drive in Water

DO NOT WEAR SEAT BELTS OR SHOULDER HARNESS

1. ENGINE . . . . . START
2. FWD AND REAR BILGE PUMPS . . . . . ON
3. VEHICLE . . . . . ENTER WATER AT SAFE POINT AND  
AT SAFE SPEED
- (C) 4. INTERCOM . . . . . DIRECT STEERING
5. VEHICLE . . . . . DRIVE, TURN, REVERSE

TO CHANGE DIRECTION, TAKE FOOT  
OFF ACCELERATOR PEDAL AND LET  
SPEEDOMETER GO TO ZERO. THEN  
MOVE GEAR SELECTOR.

DO NOT APPLY BRAKES WHILE DRIVING IN WATER,  
ENGINE CAN STALL. LET SPEEDOMETER GO TO ZERO.

6. VEHICLE . . . . . EXIT TO PERFORM POST-SWIMMING  
OPERATIONS

Post-Swimming Operations

1. UPPER TRIM VANE . . . . . RELEASE
2. VEHICLE . . . . . DRIVE TO FIRM, LEVEL GROUND
3. HAND BRAKE . . . . . SET
4. ENGINE . . . . . IDLE FOR AT LEAST 2 MINUTES TO  
COOL ENGINE

5. FUEL CONTROL . . . . . OFF
6. ENGINE ACCESSORY SWITCH . . . . . OFF
7. FWD AND REAR BILGE PUMPS SWITCHES . . . . . MOVE TO OFF — AFTER WATER IS  
OUT OF VEHICLE
8. MASTER POWER . . . . . OFF
9. WATER BARRIER . . . . . STOW — SEE p. 18-19
10. FRONT AND REAR BILGE . . . . . DRAIN WATER
11. UPPER HULL DRAIN PLUGS . . . . . INSTALL
12. HUBCAP AND FINAL DRIVE OILS . . . . . CHECK FOR WATER BUBBLES OR WHITE  
COLOR —

IF FOUND NOTIFY ORGANIZATIONAL  
MAINTENANCE.

#### Erect Water Barrier

1. LEFT SIDE TRIPOD . . . . . ERECT
2. RIGHT SIDE TRIPOD . . . . . UNSTOW AND ERECT
3. WATER BARRIER . . . . . UNSTOW
  - 3a. Flaps ..... Lift
  - 3b. Barrier Sides ..... Pull Out/Unroll  
and Front
  - 3c. Metal Cover ..... Open
  - 3d. Barrier Rear ..... Pull Out
  - 3e. Barrier ..... Pull Up Onto Sides of Hull
  - 3f. Struts and Bilge ... Place On Inside  
Pump Exhaust  
Pipes
  - 3g. Water Barrier ..... Pull On Top of Trim Vane
  - 3h. Water Barrier ..... Fasten To Trim Vane
4. REAR WATER BARRIER . . . . . ERECT
  - 4a. Rear ..... Pull Up
  - 4b. Rear and Side ..... In Tripod Slots  
Cable Ends
  - 4c. Center Strut ..... In Hull Cup
  - 4d. Barrier Corners .... Pull Up Over Tripods

## 5. SIDES OF WATER BARRIER . . . . . ERECT

- 6a. Two Cable Eyelets .. Attach To Trim Vane
- (H)b. Water Barrier ..... Pull Over Top of Trim Vane
- c. Upper Trim Vane .... Raise and Lock
- d. Trim Vane ..... Lock in Place
- e. Water Barrier ..... Forward and Latched  
Release Lever
- f. 2 Blocks ..... Remove From Left and  
Right Brackets; Install In Slides
- g. Elastic Cords ..... Attach Inside and Outside
- h. Release Lanyard .... Snap to Footman Loop
- i. Bilge Pumps ..... Install To Bilge Outlets  
Exhaust Pipes
- j. Struts ..... Into Cups
- k. Master Power ..... Move to
- l. Bilge Pump ..... Move to
- m. Bilge Pump ..... Check —
- n. Bilge Pump ..... Move to OFF  
Switches
- o. Metal Cover ..... Raise
- p. Water Barrier ..... Check For Tears - Patch If Necessary
- q. Ramp ..... Raise
- r. Master Power ..... Off



DON'T DRIVE IF BILGE  
PUMPS DON'T WORK

## Stow Water Barrier

### 1. TRIM VANE . . . . . STOW

- 1a. Ramp ..... Lower
- b. Elastic Cords ..... Remove
- c. Bilge Pump ..... Remove From Bilge Pump Outlet  
Exhaust Pipes
- d. Struts ..... Remove From Cups
- e. Lanyard ..... Unsnap From Footman Loop; Roll Up
- f. Two Blocks ..... Remove From Slides; Install In Brackets
- (H)g. Water Barrier ..... Squeeze and Pull Release Lever To  
Locking Lever Raise Trim Vane To Vertical Position
- h. Water Barrier ..... Push Off Upper Trim Vane
- i. Cable Eyelets ..... Remove
- j. Upper Trim Vane .... Fold To Locked Position
- (H)k. Snaps ..... Unfasten
- (H)l. Trim Vane ..... Fold Against Hull

2. TRIPODS . . . . . STOW
  - 2a. Cable Ends and . . . . . Remove From Tripods and Cup Strut
  - b. Water Barrier . . . . . Remove Corners
  - c. Tripods . . . . . Remove Right Side and Stow; Stow Left Side
3. FRONT OF WATER BARRIER . . . . . STOW
  - 3a. Barrier . . . . . Pull Off Hull
  - b. Cords . . . . . Tuck In
  - c. Barrier . . . . . Fold/Roll Into Trough
  - d. Barrier . . . . . Secure With Flaps
4. REAR OF WATER BARRIER . . . . . STOW
  - 4a. Metal Cover . . . . . Open
  - b. Barrier Corners/ . . . Fold/Roll Into Trough Rear
  - c. Barrier . . . . . Secure with flaps
  - d. Metal Cover . . . . . Close and latch
5. SIDES OF WATER BARRIER . . . . . STOW
  - (H) 5a. Barrier . . . . . Fold/Roll Into Trough
  - b. Bilge Pump . . . . . Place In Troughs Exhaust Pipes Cords and Struts
  - c. Barrier . . . . . Secure With Flaps
6. CARGO HATCH COVER . . . . . CLOSE
7. HORN . . . . . SOUND — 

IF TACTICAL SITUATION PERMITS
8. RAMP . . . . . RAISE

PMCS - BEFORE OPERATIONS - DRIVER

			CHECK										
LOCATION	SYSTEM	EQUIPMENT	CLEAN/CLEAR	DAMAGE/TAMPERING	IN PLACE	LEAKS	LEVEL	MISSING PARTS	OPERATION	POSITION	PRESSURE	SECURE	STATUS
HULL EXTERIOR	VEHICLE	ALL	X	X		X		X					
	FINAL DRIVE	HULL DRAIN PLUGS			X			X				X	
	DRIVER'S HATCH	COVER		X				X	X				
		SAFETY PIN			X				X			X	
	ENGINE	OIL	X				X						
		TRANSMISSION OIL	X				X						
	EXTERNAL FIRE SUPPRESSION	WIRES, SEALS		X	X			X					
HULL INTERIOR	FIRE SUPPRESSION (AUTOMATIC) SQUAD, ENGINE AREA	SWITCH							X	X			X
		WIRES, SEALS		X	X			X					
		DISCHARGE LIGHTS											X
		PORTABLE EXTINGUISHERS		X	X						X		
	DRAIN PLUGS	FRONT AND REAR			X			X				X	
	DRIVER'S SEAT	SEAT		X				X	X	X			

PMCS - DURING OPERATIONS - DRIVER

			CHECK					
LOCATION	SYSTEM	EQUIPMENT	CLEAN/CLEAR	DAMAGE/TAMPERING	IN PLACE	LEAKS	OPERATION	STATUS
HULL EXTERIOR	DRIVER'S HATCH	COVER		X			X	
		SAFETY PIN			X		X	
	RAMP	RAMP	X			X	X	
		LIGHT					X	X
DRIVER'S COMPARTMENT	INSTRUMENT PANEL GAGES	VOLTS GAGE					X	X
		ENGINE COOLANT GAGE					X	X
		ENGINE OIL GAGE					X	X
	INSTRUMENT PANEL WARNING LIGHTS	COOLANT LOW LEVEL					X	X
		TRANS OIL PRESSURE					X	X
		TRANS OIL TEMP					X	X
		AIR CLEANER CLOGGED					X	X
	PERISCOPES	LENSES	X	X	X			
		BLACKOUT COVERS		X	X		X	
	PERSONNEL HEATER	HEATER				X	X	
		DUCT AREA	X				X	
		FUEL LINES/ FITTINGS				X		
	DRIVER'S CONTROLS	ACCELERATOR PEDAL					X	
		GEAR SELECTOR					X	
		STEERING YOKE					X	
		VEHICLE BRAKES					X	

See p. 22

PMCS - Check Operation of Personnel Heater

1. MASTER POWER . . . . . ON
  2. PRESS-TO-TEST SWITCH . . . . . PRESS TO CHECK  
PERSONNEL HEATER  
LIGHT
  3. RUN-OFF-START SWITCH . . . . . MOVE TO START AND HOLD  
UNTIL LIGHT COMES ON —  

NO LONGER THAN 3 MINUTES
  4. RUN-OFF-START SWITCH . . . . . MOVE TO RUN —  

DO NOT STOP AT OFF
  5. 

IS  
PERSONNEL  
HEATER  
LIGHT  
ON?

NO → 

REPEAT STEPS 2 THRU 4

YES → 

GO TO STEP 6

NO MORE THAN 3 TIMES  
BEFORE NOTIFYING  
ORGANIZATIONAL MAIN-  
TENANCE.

  - 6. HI-LO SWITCH . . . . . SELECT HEAT AS NEEDED
  - 7. RUN-OFF-START SWITCH . . . . . MOVE TO OFF WHEN FINISHED
- DRIVER MUST REMAIN IN VEHICLE WITH MASTER  
POWER ON UNTIL HEATER COOLS AND PERSONNEL  
HEATER LIGHT GOES OFF
8. MASTER POWER . . . . . OFF — 

ONLY AFTER HEATER  
LIGHT GOES OFF.

PMCS - AFTER OPERATIONS - DRIVER

			CHECK													
LOCATION	SYSTEM	EQUIPMENT	CLEAN/CLEAR	DAMAGE/TAMPERING	HEAT	IN PLACE	LEAKS	LEVEL	OPERATION	POSITION	PRESENCE OF WATER	STATUS	TENSION	WEAR		
HULL	FUEL	GAGE						X								
		FILTER	X				X				X					
	TRANSMISSION	OIL					X	X								
		OIL FILTER INDICATOR									X		X			
	COOLING	HOSES		X		X	X							X		
		COOLANT					X	X								
		BILGE AREA	X									X				
		INTAKE SCREEN	X				X									
	RIGHT ANGLE FAN DRIVE	OIL	X				X	X								
	FINAL DRIVE	OIL					X	X			X					
	ENGINE	HOSES, CLAMPS, FITTINGS		X			X								X	
		OIL					X	X				X				
	SUSPENSION	CREW MEMBERS ASSIST DRIVER WITH SUSPENSION SYSTEM	SHOCK ABSORBERS		X	X	X			X						
			ROAD WHEELS													
			IDLERS, SUPPORT ROLLER WHEEL		X		X			X						X
			WHEEL MOUNTING HOLES, FASTENERS													X
			HUBS		X	X	X	X	X							
			SIGHT GLASSES	X	X								X			
			TRACK		X										X	X
			TRACK ADJUSTER FITTING, BLEED VALVE		X			X						X		
			TRACK PIN NUTS		X		X									X
			TRACK GUIDES		X		X									X



PMCS - WEEKLY - DRIVER

1. ROAD WHEELS . . . . . CHECK FOR BROKEN TORSION BARS
2. BATTERIES . . . . . CHECK PRESENCE, STATUS
3. RAMP HYDRAULIC POWER UNIT . . . . . CHECK CONNECTIONS, FLUID
4. TRIM VANE . . . . . CHECK FOR DAMAGED PARTS, BROKEN MESH
5. TRIM VANE LATCH . . . . . CHECK OPERATION

PMCS - MONTHLY - DRIVER AND CREW

1. SUSPENSION SYSTEM . . . . . CHECK
  - 1a. Road Wheels, Support Rollers .... Separation, Pitting, Chunking
  - b. Wheel Arms ..... Broken or Bent
  - c. Track Shoe Pads ..... Worn or Missing
  - d. Drive Sprocket Teeth ..... Worn, Broken, Cracked
  - e. Track Shoes ..... Broken or Cracked
  - f. Truck Pin Nuts ..... Centered
2. RIGHT ANGLE FAN DRIVE . . . . . CHECK OIL LEVEL
3. EXTERIOR VEHICLE LIGHTS . . . . . CHECK OPERATION
4. BILGE PUMPS . . . . . CHECK OPERATION
5. COOLANT PUMP BELT . . . . . CHECK STATUS AND OPERATION

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